

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Trade name or designation of the mixture N.F. PRECISION CLEANER

Registration number -

Synonyms None.

Product code BDS002439AE

1.2. Relevant identified uses of the substance or mixture and uses advised against

Identified uses Cleaners - Precision

Uses advised against None known.

1.3. Details of the supplier of the safety data sheet

Company name CRC Industries UK Ltd.

Address
Wylds Road
Castlefield Industrial Estate
TA6 4DD Bridgwater Somerset
United Kingdom

Telephone +44 1278 727200

Fax +44 1278 425644

E-mail hse.uk@crcind.com

Website www.crcind.com

Company name CRC Industries Europe bv

Address
Touwslagerstraat 1
9240 Zele
Belgium

Telephone +32(0)52/45.60.11

Fax +32(0)52/45.00.34

E-mail hse@crcind.com

Website www.crcind.com

1.4. Emergency telephone number Tel.:(+44)(0)1278 72 7200 (office hours: 9-17h GMT)

General in EU 112 (Available 24 hours a day. SDS/Product information may not be available for the Emergency Service.)

Austria National Poisons Information Centre +431 406 4343 (Available 24 hours a day. SDS/Product information may not be available for the Emergency Service.)

Belgium National Poisons Control Center 070 245 245 (Available 24 hours a day. SDS/Product information may not be available for the Emergency Service.)

Bulgaria National Toxicological Information Centre +359 2 9154233 (Available 24 hours a day. SDS/Product information may not be available for the Emergency Service.)

Czech Republic National Poisons Information Centre +420 224 919 293, or +420 224 915 402 (Hours of operation not provided. SDS/Product information may not be available for the Emergency Service.)

Denmark National Poisons Control Center +45 82 12 12 12 (Available 24 hours a day. SDS/Product information may not be available for the Emergency Service.)

Estonia National Poisons Information Centre 16662 or abroad: (+372) 626 9390 (Monday 9:00AM to Saturday 9:00AM (closed on Sundays and on national holidays). SDS/Product information may not be available for the Emergency Service.)

Finland National Poison Information Center (09) 471 977 (direct) or (09) 4711 (exchange) (Available 24 hours a day. SDS/Product information may not be available for the Emergency Service.)

France National Poisons Control Center	ORFILA number (INRS): + 33 (0) 1 45 42 59 59 (Available 24 hours a day. SDS/Product information may not be available for the Emergency Service.)
Hungary National Emergency Phone Number	36 80 20 11 99 (Available 24 hours a day. SDS/Product information may not be available for the Emergency Service.)
Lithuania Neatidėliotina informacija apsinuodijus	+370 5 236 20 52 or +37068753378 (Hours of operation not provided. SDS/Product information may not be available for the Emergency Service.)
Malta Accident and Emergency Department	2545 4030 (Hours of operation not provided. SDS/Product information may not be available for the Emergency Service.)
Netherlands National Poisons Information Center (NVIC)	030-274 88 88 (Only for the purpose of informing medical personnel in cases of acute intoxications)
Norway Norwegian Poison Information Center	22 59 13 00 (Available 24 hours a day. SDS/Product information may not be available for the Emergency Service.)
Portugal Poison Centre	800 250 250 (Available 24 hours a day. SDS/Product information may not be available for the Emergency Service.)
Romania Număr de telefon care poate fi apelat în caz de urgență:	021 5992300, int. 291 Spitalul Clinic de Urgență București: spital@urgentafloreasca.ro
Romania	0265 212111, 0265 211292, 0265 217235 Spitalul Clinic Județean de Urgență Târgu Mureș: secretariat@spitjudms.ro
Slovakia National Toxicological Information Centre	+421 2 5477 4166 (Available 24 hours a day. SDS/Product information may not be available for the Emergency Service.)
Sweden National Poison Information Center	112 - and ask for Poison Information (Available 24 hours a day. SDS/Product information may not be available for the Emergency Service.)
Switzerland Tox Info Suisse	145 (Available 24 hours a day. SDS/Product information may not be available for the Emergency Service.)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

The mixture has been assessed and/or tested for its physical, health and environmental hazards and the following classification applies.

Classification according to Regulation (EC) No 1272/2008 as amended

Physical hazards		
Aerosols	Category 3	H229 - Pressurized container: May burst if heated.
Health hazards		
Serious eye damage/eye irritation	Category 2	H319 - Causes serious eye irritation.
Specific target organ toxicity - single exposure	Category 3 narcotic effects	H336 - May cause drowsiness or dizziness.
Environmental hazards		
Hazardous to the aquatic environment, long-term aquatic hazard	Category 4	H413 - May cause long lasting harmful effects to aquatic life.

2.2. Label elements

Label according to Regulation (EC) No. 1272/2008 as amended

Contains: trans-dichloroethylene

Hazard pictograms



Signal word

Warning

Hazard statements

H229	Pressurized container: May burst if heated.
H319	Causes serious eye irritation.
H336	May cause drowsiness or dizziness.
H413	May cause long lasting harmful effects to aquatic life.

Prevention

P102

Response

P410 + P412 Protect from sunlight. Do not expose to temperatures exceeding 50°C/122°F.

P501	Dispose of contents/container in accordance with local/regional/national/international regulations.
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Regulation (EC) No 648/2004 on detergents: halogenated hydrocarbons > 30%

This mixture does not contain substances assessed to be vPvB / PBT according to Regulation (EC) No 1907/2006, Annex XIII. The product does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

3.2. Mixtures

Chemical name	%	CAS-No. / EC No.	REACH Registration No.	Index No.	Notes
reaction mass of: 1-ethoxy-1,1,2,3,3,3-hexafluoro-2-(trifluoromethyl)propane 1,1,1,2,3,3,4,4,4-nonafluoro-2-ethoxypropane butane	25 - 50	- 425-340-0	01-0000017174-74	603-109-00-7	
Classification: Aquatic Chronic 4;H413					
trans-dichloroethylene	5 - 10	156-60-5 205-860-2	01-2120093504-55	602-026-00-3	
Classification: Flam. Liq. 2;H225, Eye Irrit. 2;H319, STOT SE 3;H336, Aquatic Chronic 3;H412					

ATE: Acute toxicity estimate.
M: M-factor
PBT: persistent, bioaccumulative and toxic substance.
vPvB: very persistent and very bioaccumulative substance.
All concentrations are in percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume. #: This substance has been assigned Union workplace exposure limit(s).

The full text for all H-statements is displayed in section 16.

General information

Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

Inhalation

Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a poison centre or doctor/physician if you feel unwell.

Skin contact

Wash off with soap and water. Get medical attention if irritation develops and persists.

Eye contact

Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

Ingestion

In the unlikely event of swallowing contact a physician or poison control centre. Rinse mouth. Get medical attention if symptoms occur.

May cause drowsiness or dizziness. Headache. Nausea, vomiting. Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision.

4.3. Indication of any immediate medical attention and special treatment needed

Provide general supportive measures and treat symptomatically. Keep victim under observation. Symptoms may be delayed.

SECTION 5: Firefighting measures

General fire hazards

Not available.

5.1. Extinguishing media

Suitable extinguishing media Water fog. Foam. Powder. Carbon dioxide (CO₂). Water spray.

Unsuitable extinguishing media Do not use water jet as an extinguisher, as this will spread the fire.

5.2. Special hazards arising from the substance or mixture During fire, gases hazardous to health may be formed.

5.3. Advice for firefighters

Special protective equipment for firefighters Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

Special fire fighting procedures Containers should be cooled with water to prevent vapour pressure build up.

Specific methods Use standard firefighting procedures and consider the hazards of other involved materials.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

For non-emergency personnel Wear appropriate protective equipment and clothing during clean-up. Avoid breathing mist/vapours. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing.

For emergency responders Keep unnecessary personnel away. Avoid breathing mist/vapours. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. Use personal protection recommended in Section 8 of the SDS.

6.2. Environmental precautions Avoid release to the environment. Inform appropriate managerial or supervisory personnel of all environmental releases. Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground.

6.3. Methods and material for containment and cleaning up Stop leak if you can do so without risk. Move the cylinder to a safe and open area if the leak is irreparable. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Keep combustibles (wood, paper, oil etc) away from spilled material. The product is immiscible with water and will sediment in water systems. Prevent product from entering drains. Absorb in vermiculite, dry sand or earth and place into containers. Following product recovery, flush area with water.

Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.

Large Spills: Stop the flow of material, if this is without risk.

Never return spills to original containers for re-use. Use water spray to reduce vapours or divert vapour cloud drift. Dike the spilled material, where this is possible.

6.4. Reference to other sections For personal protection, see section 8 of the SDS. For waste disposal, see section 13 of the SDS.

SECTION 7: Handling and storage

7.1. Precautions for safe handling Pressurised container: Do not pierce or burn, even after use. Do not use if spray button is missing or defective. Do not spray on a naked flame or any other incandescent material. Do not smoke while using or until sprayed surface is thoroughly dry. Do not cut, weld, solder, drill, grind, or expose containers to heat, flame, sparks, or other sources of ignition. Ground and bond containers when transferring material. Do not re-use empty containers. Avoid breathing mist/vapours. Avoid contact with eyes. Avoid prolonged exposure. Use only in well-ventilated areas. Wear appropriate personal protective equipment. Avoid release to the environment. Observe good industrial hygiene practices. Provide adequate ventilation.

7.2. Conditions for safe storage, including any incompatibilities Contents under pressure. Do not expose to heat or store at temperatures above 120°F/49°C as can may burst. Do not puncture, incinerate or crush. Do not handle or store near an open flame, heat or other sources of ignition. Store away from incompatible materials (see Section 10 of the SDS).

Storage class (TRGS 510): 2B (Aerosol dispensers and lighters)

Store in a cool, dry place out of direct sunlight. Keep container tightly closed.

7.3. Specific end use(s) Not available.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limits

Austria

Components

Type

Value

(E)-1,3,3,3-tetrafluoroprop-1-ene (CAS 29118-24-9)

TWA (MAK)

1000 ppm

Austria. MAK List, OEL Ordinance (GwV), BGBl. II, no. 184/2001

Components	Type	Value
trans-dichloroethylene (CAS 156-60-5)	MAK	790 mg/m3
		200 ppm
	STEL	3160 mg/m3
		800 ppm

Belgium. Exposure Limit Values

Components	Type	Value
trans-dichloroethylene (CAS 156-60-5)	TWA	805 mg/m3
		200 ppm

Croatia. Dangerous Substance Exposure Limit Values in the Workplace (ELVs), Annexes 1 and 2, Narodne Novine, 13/09

Components	Type	Value
trans-dichloroethylene (CAS 156-60-5)	MAC	806 mg/m3
		200 ppm
	STEL	1010 mg/m3
		250 ppm

Czech Republic. OELs. Government Decree 361

Components	Type	Value
trans-dichloroethylene (CAS 156-60-5)	Ceiling	1600 mg/m3
	TWA	800 mg/m3

Denmark. Exposure Limit Values

Components	Type	Value
trans-dichloroethylene (CAS 156-60-5)	TLV	790 mg/m3
		200 ppm

Finland. Workplace Exposure Limits

Components	Type	Value
trans-dichloroethylene (CAS 156-60-5)	STEL	1000 mg/m3
		250 ppm
	TWA	800 mg/m3
		200 ppm

Germany. DFG MAK List (advisory OELs). Commission for the Investigation of Health Hazards of Chemical Compounds in the Work Area (DFG)

Components	Type	Value
(E)-1,3,3,3-tetrafluoroprop-1-ene (CAS 29118-24-9)	TWA	4700 mg/m3
		1000 ppm
trans-dichloroethylene (CAS 156-60-5)	TWA	800 mg/m3
		200 ppm

Germany. TRGS 900, Limit Values in the Ambient Air at the Workplace

Components	Type	Value
(E)-1,3,3,3-tetrafluoroprop-1-ene (CAS 29118-24-9)	AGW	4700 mg/m3
		1000 ppm
trans-dichloroethylene (CAS 156-60-5)	AGW	800 mg/m3
		200 ppm

Greece. OELs (Decree No. 90/1999, as amended)

Components	Type	Value
trans-dichloroethylene (CAS 156-60-5)	STEL	1000 mg/m3
		250 ppm
	TWA	790 mg/m3
		200 ppm

Hungary. OELs. Joint Decree on Chemical Safety of Workplaces

Components	Type	Value
trans-dichloroethylene (CAS 156-60-5)	STEL	1580 mg/m3
	TWA	800 mg/m3

Iceland. OELs. Regulation 154/1999 on occupational exposure limits

Components	Type	Value
trans-dichloroethylene (CAS 156-60-5)	TWA	790 mg/m3
		200 ppm

Ireland. Occupational Exposure Limits

Components	Type	Value
trans-dichloroethylene (CAS 156-60-5)	TWA	790 mg/m3
		200 ppm

Italy. Occupational Exposure Limits

Components	Type	Value
trans-dichloroethylene (CAS 156-60-5)	TWA	200 ppm

Norway. Administrative Norms for Contaminants in the Workplace

Components	Type	Value
trans-dichloroethylene (CAS 156-60-5)	TLV	395 mg/m3
		100 ppm

Poland. Ordinance of the Minister of Labour and Social Policy on 6 June 2014 on the maximum permissible concentrations and intensities of harmful health factors in the work environment, Journal of Laws 2014, item 817

Components	Type	Value
trans-dichloroethylene (CAS 156-60-5)	TWA	700 mg/m3

Portugal. VLEs. Norm on occupational exposure to chemical agents (NP 1796)

Components	Type	Value
trans-dichloroethylene (CAS 156-60-5)	TWA	200 ppm

Romania. OELs. Protection of workers from exposure to chemical agents at the workplace

Components	Type	Value
trans-dichloroethylene (CAS 156-60-5)	STEL	300 mg/m3
		76 ppm
	TWA	200 mg/m3
		50 ppm

Slovakia. OELs. Regulation No. 300/2007 concerning protection of health in work with chemical agents

Components	Type	Value
trans-dichloroethylene (CAS 156-60-5)	STEL	1010 mg/m3
		250 ppm
	TWA	800 mg/m3
		200 ppm

Slovenia. OELs. Regulations concerning protection of workers against risks due to exposure to chemicals while working (Official Gazette of the Republic of Slovenia)

Components	Type	Value
(E)-1,3,3,3-tetrafluoroprop-1-ene (CAS 29118-24-9)	TWA	4700 mg/m3 1000 ppm
trans-dichloroethylene (CAS 156-60-5)	TWA	800 mg/m3 200 ppm

Spain. Occupational Exposure Limits

Components	Type	Value
trans-dichloroethylene (CAS 156-60-5)	TWA	807 mg/m3 200 ppm

Switzerland. SUVA Grenzwerte am Arbeitsplatz

Components	Type	Value
(E)-1,3,3,3-tetrafluoroprop-1-ene (CAS 29118-24-9)	STEL	9400 mg/m3 2000 ppm
	TWA	4700 mg/m3 1000 ppm
trans-dichloroethylene (CAS 156-60-5)	STEL	1580 mg/m3 400 ppm
	TWA	790 mg/m3 200 ppm

UK. EH40 Workplace Exposure Limits (WELs)

Components	Type	Value
trans-dichloroethylene (CAS 156-60-5)	STEL	1010 mg/m3 250 ppm
	TWA	806 mg/m3 200 ppm

Biological limit values No biological exposure limits noted for the ingredient(s).

Recommended monitoring procedures Follow standard monitoring procedures.

Derived no effect levels (DNELs)

General Population

Components	Value	Assessment factor	Notes
trans-dichloroethylene (CAS 156-60-5)			
Long-term, Systemic, Inhalation	198 mg/m3	20	Repeated dose toxicity
Long-term, Systemic, Oral	57 mg/kg bw/day	80	Repeated dose toxicity

Workers

Components	Value	Assessment factor	Notes
reaction mass of: 1-ethoxy-1,1,2,3,3,3-hexafluoro-2-(trifluoromethyl)propane 1-ethoxy-1,1,2,2,3,3,4,4,4-nonafluorobutane (CAS -)			
Long-term, Systemic, Inhalation	1764 mg/m3		
trans-dichloroethylene (CAS 156-60-5)			
Long-term, Systemic, Inhalation	797 mg/m3	10	Repeated dose toxicity

Predicted no effect concentrations (PNECs)

Components	Value	Assessment factor	Notes
reaction mass of: 1-ethoxy-1,1,2,3,3,3-hexafluoro-2-(trifluoromethyl)propane 1-ethoxy-1,1,2,2,3,3,4,4,4-nonafluorobutane (CAS -)			
Freshwater	0,00237 mg/l		
Sediment (freshwater)	0,0393 mg/kg bw/day		
Soil	0,0041 mg/kg		
trans-dichloroethylene (CAS 156-60-5)			
Freshwater	36,4 µg/l	1000	

Sediment (freshwater)	548,3 µg/kg	
Soil	56,3 µg/kg	
STP	17 mg/l	100

8.2. Exposure controls

Appropriate engineering controls

Good general ventilation should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Provide eyewash station.

Individual protection measures, such as personal protective equipment

General information

Use personal protective equipment as required. Personal protection equipment should be chosen according to the CEN standards and in discussion with the supplier of the personal protective equipment.

Eye/face protection

Wear safety glasses with side shields (or goggles). Use eye protection conforming to EN 166.

Skin protection

- Hand protection

Nitrile gloves are recommended. For accidental contact the use of disposable gloves should be sufficient provided they are changed immediately after a splash or spill may occur. If intentional contact is expected reusable gloves should be used with a breakthrough time greater than the total duration of the product use. Suitable gloves can be recommended by the glove supplier.

- Other

Not available.

Respiratory protection

In case of insufficient ventilation, wear suitable respiratory equipment. Chemical respirator with organic vapour cartridge. (Filter type AX)

Thermal hazards

Wear appropriate thermal protective clothing, when necessary.

Hygiene measures

When using do not smoke. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

Environmental exposure controls

Inform appropriate managerial or supervisory personnel of all environmental releases. Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. Fume scrubbers, filters or engineering modifications to the process equipment may be necessary to reduce emissions to acceptable levels.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	Liquid.
Form	Aerosol.
Colour	Colourless.
Odour	Characteristic odor.
Melting point/freezing point	-49,8 °C (-57,6 °F) estimated
Boiling point or initial boiling point and boiling range	Not available.
Flammability (solid, gas)	Not available.
Flash point	None
Auto-ignition temperature	> 200 °C (> 392 °F)
Decomposition temperature	Not available.
pH	Not applicable.
Solubility(ies)	
Solubility (water)	Insoluble in water
Vapour pressure	268 hPa estimated
Vapour density	Not available.
Relative density	1,4 g/cm ³ at 20°C
Particle characteristics	Not available.

9.2. Other information

9.2.1. Information with regard to physical hazard classes

No relevant additional information available.

9.2.2. Other safety characteristics

Aerosol spray enclosed space

Time equivalent > 300 s/m³

Aerosol spray ignition distance < 15 cm

Explosive properties Not explosive.

Oxidising properties	Not oxidising.
VOC	1400 g/l

SECTION 10: Stability and reactivity

10.1. Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
10.2. Chemical stability	Material is stable under normal conditions.
10.3. Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
10.4. Conditions to avoid	Avoid high temperatures.
10.5. Incompatible materials	Strong oxidising agents.
10.6. Hazardous decomposition products	Carbon oxides.

SECTION 11: Toxicological information

General information	Occupational exposure to the substance or mixture may cause adverse effects.
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Information on likely routes of exposure

Inhalation	May cause drowsiness or dizziness. Headache. Nausea, vomiting. Prolonged inhalation may be harmful.
Skin contact	Based on available data, the classification criteria are not met.
Eye contact	Causes serious eye irritation.
Ingestion	May cause discomfort if swallowed. However, ingestion is not likely to be a primary route of occupational exposure.
Symptoms	May cause drowsiness or dizziness. Headache. Nausea, vomiting. Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision.

11.1. Information on toxicological effects

Acute toxicity	Based on available data, the classification criteria are not met. Classification based on calculation method.
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Components	Species	Test Results
reaction mass of: 1-ethoxy-1,1,2,3,3,3-hexafluoro-2-(trifluoromethyl)propane 1-ethoxy-1,1,2,2,3,3,4,4,4-nonafluorobutane		
Acute		
Dermal		
LD50	Rat	2000 - 5000 mg/kg
Inhalation		
LC50	Rat	> 989 mg/l
Oral		
LD50		> 2000 mg/kg
trans-dichloroethylene (CAS 156-60-5)		
Acute		
Dermal		
LD50	Rabbit	> 5000 mg/kg
Inhalation		
LC50	Rat	95,6 mg/l/4h
Oral		
	Rat	7902 mg/kg
Skin corrosion/irritation	Based on available data, the classification criteria are not met.	
Serious eye damage/eye irritation	Causes serious eye irritation.	
Respiratory sensitisation	Based on available data, the classification criteria are not met.	
Skin sensitisation	Based on available data, the classification criteria are not met.	
Germ cell mutagenicity	Based on available data, the classification criteria are not met.	
Carcinogenicity	Based on available data, the classification criteria are not met.	

Hungary. 26/2000 EüM Ordinance on protection against and preventing risk relating to exposure to carcinogens at work (as amended)

Not listed.

Reproductive toxicity	Based on available data, the classification criteria are not met.
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Specific target organ toxicity - single exposure	May cause drowsiness or dizziness.
Specific target organ toxicity - repeated exposure	Based on available data, the classification criteria are not met.
Aspiration hazard	Not likely, due to the form of the product.
Mixture versus substance information	Not available.

11.2. Information on other hazards

Endocrine disrupting properties	The product does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.
Other information	Not available.

SECTION 12: Ecological information

12.1. Toxicity	May cause long lasting harmful effects to aquatic life.
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Components	Species		Test Results
reaction mass of: 1-ethoxy-1,1,2,3,3,3-hexafluoro-2-(trifluoromethyl)propane 1-ethoxy-1,1,2,2,3,3,4,4,4-nonafluorobutane			
Aquatic			
Acute			
Algae	EC50	Algae	> 100 mg/l, 48 h
Crustacea	NOEC	Daphnia	> 100 mg/l, 96 h
trans-dichloroethylene (CAS 156-60-5)			
Aquatic			
Acute			
Algae	EC50	Algae	36,36 mg/l, 48 h
Crustacea	LC50	Water flea (Daphnia magna)	>= 170 - <= 290 mg/l, 48 hours
Fish	LC50	Bluegill (Lepomis macrochirus)	>= 120 - <= 160 mg/l, 96 hours

12.2. Persistence and degradability	No data is available on the degradability of any ingredients in the mixture.
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12.3. Bioaccumulative potential

Partition coefficient n-octanol/water (log Kow)	
trans-dichloroethylene	2,06

Bioconcentration factor (BCF)	Not available.
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12.4. Mobility in soil	No data available.
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12.5. Results of PBT and vPvB assessment	This mixture does not contain substances assessed to be vPvB / PBT according to Regulation (EC) No 1907/2006, Annex XIII.
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12.6. Endocrine disrupting properties	The product does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.
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12.7. Other adverse effects	GWP: 4 The product contains volatile organic compounds which have a photochemical ozone creation potential.
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SECTION 13: Disposal considerations

13.1. Waste treatment methods

Residual waste	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).
Contaminated packaging	Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal. Do not re-use empty containers.
EU waste code	The Waste code should be assigned in discussion between the user, the producer and the waste disposal company.
Disposal methods/information	Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Contents under pressure. Do not puncture, incinerate or crush. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations.
Special precautions	Dispose in accordance with all applicable regulations.

SECTION 14: Transport information

ADR

14.1. UN number	UN1950
14.2. UN proper shipping name	AEROSOLS
14.3. Transport hazard class(es)	
Class	2.2
Subsidiary risk	-
Label(s)	2.2
Hazard No. (ADR)	Not available.
Tunnel restriction code	E
14.4. Packing group	Not available.
14.3. Transport hazard class(es)	
ADR/RID - Classification code:	5A
14.5. Environmental hazards	No
14.6. Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.

IATA

14.1. UN number	UN1950
14.2. UN proper shipping name	Aerosols
14.3. Transport hazard class(es)	
Class	2.2
Subsidiary risk	-
14.4. Packing group	Not available.
14.5. Environmental hazards	No
ERG Code	2L
14.6. Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.

Other information

Passenger and cargo aircraft	Allowed with restrictions.
Cargo aircraft only	Allowed with restrictions.

IMDG

14.1. UN number	UN1950
14.2. UN proper shipping name	Aerosols
14.3. Transport hazard class(es)	
Class	2.2
Subsidiary risk	-
14.4. Packing group	Not available.
14.5. Environmental hazards	
Marine pollutant	No
EmS	F-D, S-U
14.6. Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.

14.7. Maritime transport in bulk according to IMO instruments

Not established.

ADR; IATA; IMDG



SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

EU regulations

Regulation (EC) No. 1005/2009 on substances that deplete the ozone layer, Annex I and II, as amended

Not listed.

Regulation (EU) 2019/1021 On persistent organic pollutants (recast), as amended

Not listed.

Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 1 as amended

Not listed.

Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 2 as amended

Not listed.

Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 3 as amended

Not listed.

Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex V as amended

Not listed.

Regulation (EC) No. 166/2006 Annex II Pollutant Release and Transfer Registry, as amended

Not listed.

Regulation (EC) No. 1907/2006, REACH Article 59(10) Candidate List as currently published by ECHA

Not listed.

Authorisations

Regulation (EC) No. 1907/2006, REACH Annex XIV Substances subject to authorization, as amended

Not listed.

Restrictions on use

Regulation (EC) No. 1907/2006, REACH Annex XVII Substances subject to restriction on marketing and use as amended

trans-dichloroethylene (CAS 156-60-5)

Directive 2004/37/EC: on the protection of workers from the risks related to exposure to carcinogens and mutagens at work, as amended.

Not listed.

Other EU regulations

Directive 2012/18/EU on major accident hazards involving dangerous substances, as amended

trans-dichloroethylene (CAS 156-60-5)

Other regulations

The product is classified and labelled in accordance with Regulation (EC) 1272/2008 (CLP Regulation) as amended. This Safety Data Sheet complies with the requirements of Regulation (EC) No 1907/2006, as amended.

National regulations

Follow national regulation for work with chemical agents in accordance with Directive 98/24/EC, as amended.

15.2. Chemical safety assessment

No Chemical Safety Assessment has been carried out.

SECTION 16: Other information

List of abbreviations

ADN: European Agreement Concerning the International Carriage of Dangerous Goods by Inland Waterways.

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road.

ADR: European Agreement Concerning the International Carriage of Dangerous Goods by Road.

AGW: Occupational threshold limit value (Arbeitsplatzgrenzwert – Germany).

ATE: Acute Toxicity Estimate according to REGULATION (EC) No 1272/2008 (CLP).

CAS: Chemical Abstract Service.

Ceiling: Short Term Exposure Limit Ceiling value.

CEN: European Committee for Standardization.

CLP: Classification, Labeling and Packaging REGULATION (EC) No 1272/2008 on classification, labeling and packaging of substances and mixtures.

GWP: Global Warming Potential.

IATA: International Air Transport Association.

IBC Code: International Code for the Construction and Equipment of Ships Carrying Dangerous Chemicals in Bulk.

IMDG: International Maritime Dangerous Goods.

MAC: Maximum Allowed Concentration.

MAK: Threshold limit values Germany (Maximale Arbeitsplatzkonzentration - DFG).

MARPOL: International Convention for the Prevention of Pollution from Ships.

PBT: Persistent, bioaccumulative and toxic.

REACH: Registration, Evaluation and Authorization of Chemicals (REGULATION (EC) No 1907/2006 concerning Registration, Evaluation, Authorization and Restriction of Chemicals).

RID: Regulations concerning the international carriage of dangerous goods by rail (Règlement International concernant le transport de marchandises dangereuses par chemin de fer).

RID: Regulations concerning the International Carriage of Dangerous Goods by Rail.

STEL: Short term exposure limit.

TLV: Threshold Limit Value.

TWA: Time Weighted Average.
VLE: Exposure Limit Value.
VME: Exposure Average Value.
VOC: Volatile organic compounds.
vPvB: Very persistent and very bioaccumulative.
STEL: Short-term Exposure Limit.

References

Not available.

Information on evaluation method leading to the classification of mixture

The classification for health and environmental hazards is derived by a combination of calculation methods and test data, if available.

Full text of any H-statements not written out in full under Sections 2 to 15

H225 Highly flammable liquid and vapour.
H319 Causes serious eye irritation.
H336 May cause drowsiness or dizziness.
H412 Harmful to aquatic life with long lasting effects.
H413 May cause long lasting harmful effects to aquatic life.

Revision information

None.

Training information

Follow training instructions when handling this material.

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